

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A bipolar transistor suitable for operation as a saturated switch comprising:

a first semiconductor region of a first conductivity type defining a collector region;
a second semiconductor region of a second conductivity type defining a base region;
a third semiconductor region of said first conductivity type defining an emitter region; and
a metal layer providing metal track contacts that directly contact ~~to said base and emitter regions~~ the base region and the emitter region;

wherein the emitter region defines a first surface, the base region extending to the first surface in locations defined by apertures through the emitter region, the metal layer overlying the first surface;

wherein the bipolar transistor has a specific area resistance less than $500\text{m}\Omega\cdot\text{mm}^2$;
~~when the metal layer has a thickness less than $3\mu\text{m}$;~~

~~and wherein the thickness of said metal layer is~~ has a thickness that is substantially uniformly greater than $3\mu\text{m}$; and

wherein voltage drops in the metal track contacts, which contact the base region and the emitter region, are reduced when the bipolar transistor is in an on state to distribute a voltage bias to a junction of the base region and the emitter region such that saturation resistance is reduced by an amount greater than 0% and up to 30% compared to the same bipolar transistor having a metal layer of thickness less than $3\mu\text{m}$.

2. (Previously Presented) A bipolar transistor according to claim 1, wherein the thickness of the metal layer is no less than $4\mu\text{m}$.

3. (Previously Presented) A bipolar transistor according to claim 1, wherein the thickness of the metal layer is no less than $6\mu\text{m}$.

4. (Canceled).

5. (Previously Presented) A bipolar transistor according to claim 1, wherein adjacent apertures are spaced less than $100\mu\text{m}$ from each other.

6. – 9. (Canceled).

10. (Currently Amended) A method of manufacturing a bipolar transistor having reduced saturation resistance, the method comprising:

providing a bipolar transistor including a base region~~[[,]]~~ and an emitter region; and providing a metal layer providing having metal track contacts to that directly contact the base region and the emitter region;

the bipolar transistor having a specific area resistance of less than 500 mOhms.mm^2 when the metal layer has a thickness of less than $3\mu\text{m}$; and

increasing wherein the thickness of the metal layer to be is substantially uniformly greater than $3\mu\text{m}$ to reduce voltage drops in the metal track contacts, which contact the base region and the emitter region, to provide substantially even biasing of a junction of the base region and the emitter region such that saturation resistance is reduced by an amount greater than 0% and up to 30%.

11. (Currently Amended) The method according to claim 10, wherein ~~increasing the thickness of the metal layer to be greater than $3\mu\text{m}$ comprises increasing the thickness of the metal layer to be~~ is no less than $4\mu\text{m}$.

12. (Previously Presented) A bipolar transistor according to claim 2, wherein adjacent apertures are spaced less than $100\mu\text{m}$ from each other.

13. (Previously Presented) A bipolar transistor according to claim 3, wherein adjacent apertures are spaced less than $100\mu\text{m}$ from each other.

14. (Previously Presented) A bipolar transistor according to claim 2, wherein the thickness of the metal layer is no less than $6\mu\text{m}$.

15. (New) A bipolar transistor according to claim 1, wherein at least some of the metal track contacts directly contact the base region.

16. (New) A bipolar transistor according to claim 1, wherein the metal track contacts comprise base metal contacts and emitter metal contacts, the base metal contacts for contacting the base region, the emitter metal contacts for contacting the emitter region.

17. (New) A bipolar transistor according to claim 16, wherein a thickness of the base metal contacts is substantially uniformly greater than $3\mu\text{m}$.

18. (New) A bipolar transistor according to claim 17, wherein a thickness of the emitter metal contacts is substantially uniformly greater than $3\mu\text{m}$.

19. (New) A bipolar transistor according to claim 1, wherein the first conductivity type is a conductivity opposite a conductivity of the second conductivity type.